

57533 (R 3) CR 3 S. • ELKHART, INDIANA 46517 • (219) 294-5466

May 9, 1989

Waste Management Division U.S. E.P.A. -Region V 230 South Dearborn St. Chicago, Illinois 60604

Atten: Ms Susan Swales (SHS-11)

Acten: Ms Susan Swates (5m5-11

Dear Ms Swales:

The people that have formulated the information on this report are Raymond E. Gamble, sales and F. Edward Freel, Vice President of Finance and Treasurer.

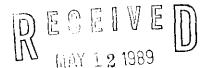
The documents used in this report are the M.S.D.S. papers and the transporter's manifest papers.

There is no one else beside Raymond Gamble and Edward Freel for information on this report.

We at KampCo Steel Products Inc. manufacture horse trailer and truck body parts. We also make custom design parts for different customers throghout the country. The manufacturing processes consist of shearing, braking and welding of parts for customers. KampCo started in September of 1972.

The ingredients and raw materials used by KampCo Steel Products throughout this time period is the attached M.S.D.S. papers of steel, Aluminum, oil and drawing products.

The waste generated at KampCo Steel Porducts consist of run-off oils and drawing compound mix. This mix amounts to about 25 gallons every year and a half. Some years we do not have any waste build-up. KampCo Steel Products U.S. E.P.A. number is as follows: I.N.D. 058956806. We received this number in 1985.



SUPERFUND PROGRAM MANAGEMENT BRANCH



57533 (R 3) CR 3 S. • ELKHART, INDIANA 46517 • (219) 294-5466

KampCo Steel Products waste was picked up in October 1985 by Chemical Services Corp. at 5330 West 137th Place, Crestwood, Illinois 60445. Their U.S. E.P.A. Number is: ILD 980701100 and taken to chem-Net Services, 18550 Allen Rd., Wyandotte, Michigan 48192. Also KampCo Steel Products used Amoco Oil of South Bend Indiana to pump our pits out, and reclaim our used oils. They restored them for future use as a drawing compount.

KampCo Steel Products did not dispose of any wastes on our property in the time period of 1972 to 1976, or up to the date of May 1989.

KampCo Steel Products waste material was never taken to HimCo at any time during 1972 to 1976 and up to date of 1989.

The only thing that was and is taken to HimCo is office trash and the (2) Brake room's trash and bath room trash.

Sincerely,

RAMPCO STEEL PRODUCTS INC.

J. Edward Freed Raymond E. Gamble

Sales

F. Edward Freel

V.P. of Finance & Treasurer

RG/EF/sf



MANUFACTURER: Amoco Oil Company 200 East Randolph Drive Chicago, Illinois 60601 EMERGENCY HEALTH INFORMATION: (800) 447-8735 EMERGENCY SPILL INFORMATION: (800) 424-9300 OTHER PRODUCT SAFETY INFORMATION: (312) 856-3907

IMPORTANT COMPONENTS: Hydrofinished, solvent-refined paraffinic petroleum oil. CAS #64742-54-7.

WARNING STATEMENT: None required.

APPEARANCE AND ODOR: Lily-white, oily liquid.

_ HEALTH HAZARD INFORMATION _

EYE

EFFECT:

No significant irritation expected.

FIRST AID:

Flush eyes with plenty of water.

PROTECTION:

None required, however, use of safety glasses is good industrial practice.

STOREST SECTION OF STREET

EFFECT:

None expected for single short-term exposures. Prolonged or repeated

contact may produce some irritation.

FIRST AID:

None required.

PROTECTION:

Wear protective gloves if prolonged or repeated contact is likely.

INHALATION

EFFECT:

None expected under normal conditions of use.

FIRST AID:

None required.

PROTECTION:

None required for usual conditions of use.

INGESTION

EFFECT:

Expected to be relatively non-toxic.

FIRST AID:

If a large amount is swallowed, induce vomiting, get medical attention.

_ FIRE AND EXPLOSION INFORMATION _

FLASHPOINT:

400°F, Minimum (COC)

Agents approved for Class B hazards (e.g., dry chemical, carbon EXTINGUISHING MEDIA:

dioxide, halogenated agents, foam, steam) or water fog.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None.

No. 201 1 94 10294

PAGE 02 OF 03

REACTIVITY INFORMATION
STABILITY: Stable.
CHEMICAL AND PHYSICAL PROPERTIES
SOLUBILITY IN WATER: Negligible, below 0.1%
SPECIFIC GRAVITY (WATER = 1): 0.88
VISCOSITY: 220-250 SUS @ 100°F VISCOSITY INDEX: 90 minimum
POUR POINT: Maximum -20°F (-29°C)
STORAGE AND ENVIRONMENTAL PROTECTION
STORAGE REQUIREMENTS: No special requirements.
SPILLS AND LEAKS: Treat as an oil spill. Contain and remove by mechanical means.
WASTE DISPOSAL: Enclosed-controlled incineration unless directed otherwise by applicable ordinances.
SPECIAL PRECAUTIONS: Avoid strong oxidizers.
ing transport for the control of the
EYE: A similar product produced a maximum primary eye irritation score of 4.7/110.0; 1 hour (rabbits).
SKIN: A similar product produced a dermal LD50 greater than 5g/kg (rabbits).
INGESTION: A similar product produced an oral LD50 greater than 10g/kg (rats).
REGULATORY INFORMATION
OSHA HAZARD COMMUNICATION STANDARD: Not hazardous per 29 CFR 1910.1200(d).
DOT PROPER SHIPPING NAME (BULK, LAND): Not regulated.
Truck/Rail Shipping Class: Petroleum Lubricating Oil.
ISSUE INFORMATION

BY:

Stephen A. Elbert Mgr., Product Safety & Toxicology

ISSUED: June 05, 1985 SUPERSEDES: January 02, 1985



MANUFACTURER: Amoco Oil Company 200 East Randolph Drive Chicago, Illinois 60601 EMERGENCY HEALTH INFORMATION: (800) 447-8735 EMERGENCY SPILL INFORMATION: (800) 424-9300 OTHER PRODUCT SAFETY INFORMATION: (312) 856-3907

IMPORTANT COMPONENTS: Hydrofinished solvent refined paraffinic petroleum oil. CAS #64742-54-7.

Solvent refined paraffinic petroleum oil. CAS #64741-88-4.

WARNING STATEMENT: None required.

APPEARANCE AND ODOR: Pale colored oil.

_ HEALTH HAZARD INFORMATION _

EFFECT:

No significant irritation expected.

FIRST AID:

Flush eyes with plenty of water.

PROTECTION:

None required; however, use of safety glasses is good industrial practice.

SKIN

EFFECT:

None expected for single short-term exposures. Prolonged or repeated contact may produce some irritation.

FIRST AID:

None required.

PROTECTION:

Wear protective gloves if prolonged or repeated contact is likely.

INHALATION

EFFECT:

None expected under normal conditions of use.

FIRST AID:

None required.

PROTECTION:

None required for normal conditions of use.

INGESTION

EFFECT:

Expected to be relatively non-toxic.

FIRST AID:

If a large amount is swallowed, induce vomiting. Get medical attention.

PAGE 02 OF 03

FIRE AND EXPLOSION INFORMATION
FLASHPOINT: 380°F, (COC) Minimum
EXTINGUISHING MEDIA: Agents approved for Class B hazards (e.g., dry chemical, carbon dioxide, halogenated agents, foam, steam) or water fog.
UNUSUAL FIRE AND EXPLOSION HAZARDS: None.
REACTIVITY INFORMATION
STABILITY: Stable.
CHEMICAL AND PHYSICAL PROPERTIES
SOLUBILITY IN WATER: Negligible, below 0.1%
SPECIFIC GRAVITY (WATER = 1): 0.88
VISCOSITY: 320-340 SSU @ 100°F VISCOSITY INDEX: 110 minimum
POUR POINT: -30°F maximum
STORAGE AND ENVIRONMENTAL PROTECTION
STORAGE REQUIREMENTS: No special requirements.
SPILLS AND LEAKS: Treat as an oil spill. Contain and remove by mechanical means.
WASTE DISPOSAL: Disposal must be in accordance with applicable federal, state, or local regulations. Enclosed-controlled incineration is recommended unless directed otherwise by applicable ordinances.
SPECIAL PRECAUTIONS: Avoid strong oxidizers.
TOXICOLOGICAL INFORMATION
Specific toxicity tests have not been conducted on this product. Our hazard evaluation is based on information from similar products, the ingredients, technical literature, and/or professional experience.
REGULATORY INFORMATION
OSHA HAZARD COMMUNICATION STANDARD: Not hazardous per 29 CFR 1910.1200(d).
DOT PROPER SHIPPING NAME (BULK, LAND): Not regulated.
ISSUE INFORMATION
BY: Stylent Sthat

Stephen A. Elbert Mgr., Product Safety & Toxicology

ISSUED: July 15, 1985 SUPERSEDES: January 02, 1985



MANUFACTURER: Amoco Oil Company 200 East Randolph Drive Chicago, Illinois 60601 EMERGENCY HEALTH INFORMATION: EMERGENCY SPILL INFORMATION: (800) 447-8735 (800) 424-9300 OTHER PRODUCT SAFETY INFORMATION: (312) 856-3907

IMPORTANT COMPONENTS:

Solvent refined paraffinic petroleum oil, CAS No 64741-88-4;

ACGIH for oil mist 5 mg/m3. Petroleum sulfonate.

2-Butoxyethanol, CAS No. 111-76-2, ACGIH TLV (skin) 25 ppm (120 mg/m3), OSHA PEL 50 ppm (240 mg/m3).

WARNING STATEMENT: None required.

APPEARANCE AND ODOR: Light colored, oily liquid.

HEALTH HAZARD INFORMATION

EYE

EFFECT:

No significant irritation expected.

FIRST AID:

Flush eyes with plenty of water. но йоттыни

PROTECTION:

None required; however, use of safety glasses is good industrial practice.

SKIN

EFFECT:

None expected for single short-term exposures. Prolonged or repeated contact may produce some irritation.

FIRST AID:

None required.

PROTECTION:

Wear protective clothing and gloves if prolonged or repeated contact is

likely.

INHALATION

EFFECT:

None expected under normal conditions of use.

FIRST AID:

None required.

PROTECTION:

None required for normal conditions of use.

INGESTION

EFFECT:

Expected to be relatively non-toxic.

FIRST AID:

If a large amount is swallowed, induce vomiting. Get medical attention.

PAGE 02 OF 03

FIRE AND EXPLOSION INFORMATION	nifes a ter
FLASHPOINT: Not applicable.	
EXTINGUISHING MEDIA: Not applicable.	
REACTIVITY INFORMATION	
STABILITY: Stable.	
CHEMICAL AND PHYSICAL PROPERTIES TO	11 - 11
SOLUBILITY IN WATER: Emulsifiable.	
SPECIFIC GRAVITY (WATER = 1): 0.91	
VISCOSITY: 300-600 SUS @ 100°F.	
POUR POINT: 15°F Maximum.	
STORAGE AND ENVIRONMENTAL PROTECTION	
STORAGE REQUIREMENTS: No special requirements.	
SPILLS AND LEAKS: Contain and remove by mechanical means.	·
WASTE DISPOSAL: Enclosed-controlled incineration or permitted landfill unlocated to the dispersion of the controlled incineration of permitted landfill unlocated to the controlled by applicable ordinances.	: 255
TOXICOLOGICAL INFORMATION	
EYE: Maximum primary eye irritation score 15.3/110.0 (rabbits).	
SKIN: Dermal LD50 greater than 5 g/kg (rabbits). A similar product product primary dermal irritation score of 4.4/8.0 (rabbits).	ed a
INHALATION: LC50 greater than 1.29 mg/liter (rats).	
INGESTION: Acute oral LO50 greater than 10 g/kg (rats).	
This product contains 2-butoxyethanol. Repeated overexposure to 2-butoxyethanol may result in anemia. Overexposure to 2-butoxyethanol should be ocifi the ACGIH TLV for oil mist is observed.	cur
REGULATORY INFORMATION	
OSHA HAZARD COMMUNICATION STANDARD: Listed by ACGIH.	

DOT PROPER SHIPPING NAME (BULK, LAND): Not regulated.



MANUFACTURER: Amoco Oil Company 200 East Randolph Drive Chicago, Illinois 60601 EMERGENCY HEALTH INFORMATION: (800) 447-8735 EMERGENCY SPILL INFORMATION: (800) 424-9300 OTHER PRODUCT SAFETY INFORMATION: (312) 856-3907

IMPORTANT COMPONENTS: Petroleum naphtha. ACGIH TWA TLV 100 ppm(575 mg/m3).

WARNING STATEMENT:

Combustible. Can be harmful if high concentrations are inhaled. Can produce skin irritation upon prolonged or repeated contact. Harmful if swallowed and/or aspirated into lungs. See also

Supplemental Information.

APPEARANCE AND ODOR: Clear liquid.

_ HEALTH HAZARD INFORMATION ___

EYE

EFFECT:

None expected. See Toxicology Section.

FIRST AID:

Flush eyes with plenty of water.

<u> Langua Languaga da Baratan da B</u>

PROTECTION: None required, however, use of safety glasses is good industrial practice.

SKIN

EFFECT:

)

Can cause skin irritation on prolonged or repeated contact. See

Toxicology Section.

FIRST AID:

Wash exposed skin with soap and water. Remove contaminated clothing, including shoes, and thoroughly clean and dry before reuse.

PROTECTION:

If contact is likely, wear protective clothing and gloves. Avoid prolonged or repeated skin contact.

INHALATION

Can be harmful if high concentrations are inhaled. Inhalation of high concentrations results in dizziness, headache and nausea. See Toxicology

FIRST AID:

If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get medical attention.

PROTECTION: If ventilation is inadequate, use NIOSH/MSHA certified respirator which

will provide protection against organic vapor/mist. Avoid breathing vapor or mist. Use with adequate ventilation.

PAGE 02 OF 03

HEALTH HAZARD INFORMATION - CONTINUED
INGESTION
EFFECT: Expected to be relatively non-toxic. Harmful or fatal if swallowed and/or aspirated into lungs. Low viscosity product. See Toxicology Section.
FIRST AID: If swallowed, do NOT induce vomiting, get immediate medical attention
FIRE AND EXPLOSION INFORMATION
FLASHPOINT: 100°F, (TCC)
FLAMMABLE LIMITS: UPPER: 7% LOWER: 1%
EXTINGUISHING MEDIA: Agents approved for Class B hazards (e.g. dry chemical, carb dioxide, halogenated agents, foam) and water fog.
UNUSUAL FIRE AND EXPLOSION HAZARDS: None.
PRECAUTIONS: Keep away from heat and open flame. Disconding the second open cases for the second open flame. CHEMICAL AND PHYSICAL PROPERTIES
BOILING POINT: 300°F TO 395°F, Range
SOLUBILITY IN WATER: Negligible, below 0.1%.
SPECIFIC GRAVITY (WATER = 1): 0.79
STORAGE AND ENVIRONMENTAL PROTECTION
STORAGE REQUIREMENTS: Store in a combustible liquids storage area.
SPILLS AND LEAKS: Eliminate all sources of ignition. Contain on an absorbent material.
WASTE DISPOSAL: Enclosed-controlled incineration unless directed otherwise by applicable ordinances.
SPECIAL PRECAUTIONS: Avoid strong oxidizers.
TOXICOLOGICAL INFORMATION
EYE: Primary irritation score of 0.67/110.0; 96 hours (rabbits).
SKIN: Primary irritation score of $1.1/8.0$ (rabbits). Acute dermal LD50 greater t $2g/kg$ (rabbits).

INHALATION: Acute LC50 greater tha 11.5mg/liter; 6 hours (rats).

INGESTION: Acute oral LO50 greater than 5g/kg (rats).



JO GAL. WATE

Metal Forming Lubricant

₹71-081-B

PRODUCT INFORMATION

VERSATILE SEMI-SYNTHETIC METAL FORMING LUBRICANT NITRITE AND PHENOL-FREE

VAN STRAATEN 71-081-B is a water dilutible semi-synthetic lubricant applicable for the tube forming operations of ferrous and non ferrous metals. This product offers excellent cleanliness and in-process corrosion control. VAN STRAATEN 71-081-B contains a light blue dye in the concentrate, and forms a stable, translucent blue emulsion in both hard and soft water.

KEY PERFORMANCE BENEFITS

Non-nitrited and Non-phenolic - to meet the most stringent industrial chemical restrictions for both operator safety and waste disposal requirements.

Outstanding cleanliness - promotes safety, keeps machine tools working efficiently. No slippery, oily residues on either the machine tool or workpiece.

<u>Effective rust control</u> - based on combined polar and passivating rust protection, prevents in-process corrosion of steel and helps protect machine tools from damaging bi-metallic corrosion.

Resists rancidity and mold growth - ends Monday morning odor problems. Provides extended service in recirculating central systems without requiring special maintenance procedures.

Easy to mix - even in hard water, forming a blue, translucent mix that permits the machinist to see his work in progress.

Safe and pleasant to use - mild to machine operators' skin, clean, non-flammable, characterized by a fresh neutral odor.

RECOMMENDED DILUTIONS

Tube forming operations

20:1

Cleaner: 3625

Run at 2% by Volume

50 gal water I gal cleaner

630 W. Washington Blvd • Chicago IL 60606 • (312) 454-1000 • Telex 25-3556

Metal Forming Lubricant

71-081-B

.585/# 4.86 gal

APPLICATIONS, SPECIFICATIONS, AND PROPERTIES

TYPICAL PHYSICIAL AND CHEMICAL CHARACTERISTICS

The values shown here are representative of typical laboratory tests of commercial production of VAN STRAATEN 71-081-B, and are not specifications for this product.

Flash Point, COC Fire Point, COC Flash Point after water evaporation, COC API Gravity @ 60°F (15.5°C) Specific Gravity @ 60°F (15.5°C) Bulk Density @ 60°F (15.5°C) Viscosity @ 60°F (15.5°C) Viscosity @ 100°F (38°C) Pour Point Total Sulfur, Calculated Active Sulfur, Calculated Total Chlorine, Calculated pH of Concentrate pH of Emulsion @ 20:1 pH of Emulsion @ 40:1

None 300°F. (149°C) 11.0 - 11.2 0.99 - 0.9938.3 lbs/gal. (0.991 Kg/L) 380-340 SUS (60-73 cs) 130-150 SUS (17-32 cs) 25°F (-4°C) 0.15 - 0.16None None 9.8 - 10.0 9.5 - 9.7 9.4 - 9.6

Æ

Use VAN STRAATEN 71-081-B for tube forming of ferrous and non ferrous alloys. Non-staining to aluminum and copper alloys.

15

Ï

KK

CONCENTRATION CHECKS

Concentration checks by American Optical Company Fluid Tester, distributed by the Van Straaten Chemical Company. Refer to the conversion chart at right.

STORAGE AND HANDLING

Non-flammable, mildly alkaline solution. Spills may be washed away with water. Mild, non-irritating to the skin when used as directed in accordance with standard industrial practices.

DISPOSABILITY

Contains no phosphates, chlorine or active sulfur. See your Van Straaten Sales Engineer for information on industrial waste water treatment methods applicable to your area.

PACKAGING

In 55 gallon drums and tank trucks.

CPS:kc 102682





MATERIAL SAFETY DATA SHEET

)N	ATIO	IFIC	IDEN	DUCT	PRO			
-454-1000	E NO. ONE NO.312-4	a war a lagrage							Van	MANUFACŢURER'S NAME
			1		Blvd.,	12	:			
				<u></u>	1-B	· · · · · · · · · · · · · · · · · · ·	<u></u>			
				12 (1 1 1 1 1 1				SYNONYMS
		TS	IENT	RE	US IN					
ZARD DAŢA	HAZARI	*				- 4 t	· · · · · · · · · · · · · · · · · · ·			- 24 · · · · · · · · · · · · ·
/M ³	TLV 5mg/M	17.0		:	-					Petroleum 011
	<u> </u>		C Berling of the Control		Hi.	Santa A.S. s) 5	6.1.35	'B	- <u></u>
		No. of Section 1								Contains no othe
	TOATMA	s (4.27%)				· · · · · · · · · · · · · · · · · · ·				hazardous as def
		?			. •				•	******
		1			•					
				, .	······································					
				· `	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·				
									•	
			+							
							•			
			\	DAT	SICAL	PHY	111			1000 1000 1000 1000 1000 1000 1000 100
· · · · · · · · · · · · · · · · · · ·		INT N	ING POI	7				T		OILING POINT, 760 MM HG
	- 		R PRES	VAP		50°F				PECIFIC GRAVITY (H ₂ O = 1)
ifiable in	Emulsif	<u>Сл.</u> IN H ₂ O, % E	BILITY	SOL	•				-	APOR DENSITY (AIR = 1)
_{re=1)} less th	UTYL ACETATE = 1				41					VOLATILES BY VOL.
	0 1. 20/1	10.6.4	nnc_	ph (,	•		_		PPEARANCE AND ODOR
i o re	20mm Hg rwEmulsi all pro	SURE CA. IN H ₂ O, % E	R PRESS	VAP SOL EVA	,	60 ⁰ F 5 0% (wa anspar	0.0 0.0	ca.		PECIFIC GRAVITY (H ₂ O = 1) APOR DENSITY (AIR = 1) VOLATILES BY VOL.

liquid;mild odor 40/1 9.7 + 0.1

VS 71-081-8

	IV FIRE AND	DEXPLOS	ION DATA9	In the state of th
FLASH POINT (TEST METHOD)	COC: None		FIRE POINT (TEST METHOD	COC: None
FLAMMABLE LIMIT	SINAIR % BY VOL.	LOWER	N.A.	PPER N.A.
EXTINGUISHING MEDIA	CO ₂ , foam, dry chem	•		
SPECIAL FIRE FIGHTING PROCEDURES	In the event of wat coc: 300°F min.).	ervloss, i Treat as	an oil fire	burn (flash point
UNUSUAL FIRE AND EXPLOSION HAZARD	Complete combustion oxides of carbon, n	of residu itrogen ar	ue may resul id sulfur.	t in production of
	V HEALTH HA	ZARD INF	ORMATION	
HEALTH HAZARD D	Applies to concent	rate. Haz		
ROUTES OF EXPOSU	RE AND EFFECTS OF OVEREXPOSURE			
INHALATION	TLV 5 mg/M ³ per ACG	IH standar	d for oil m	ist.
	own to be	ES ROW KRI	er ingredien	n. (- () - (n
SKIN CONTAC	Continued contact m	ay cause√s	kin irritat	fon.
SKIN ABSORPT	Not expected to be	absorbed t	hrough skin	•
EYE CONTACT	Will cause eye irri	tation.		
INGESTION	LD ₅₀ not established	d. Produc	t is not ed	ible.
EMERGENCY AND F	RST AID PROCEDURES			
EYES:	Flush with copious am	ounts of w	water;consul	t a physician.
SKIN:	Wash with soap and ri	nse with w	water.	
INHALATION:	If irritation occurs,	remove v	ictim to fre	sh air area and
INGESTION:	avoid further inhalat	ion. Cont	act physicia	n if necessary.
NOTES TO PHYSICIA	N A A A A A A A A A A A A A A A A A A A		•	
		•	-	,
e Santa de Carlos de Carlos de Carlos de Carlo			* _ * ~	·
			• =	
	•		•	

VI REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY TO THE PROPERTY OF THE

Stable under normal use conditions.

INCOMPATIBILITY

Strong oxidizing agents; mineral acids.

HAZARDOUS DECOMPOSITION PRODUCTS

Complete combustion; oxides of carbon, nitrogen and sulfur.

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION NA.

VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

Flush small spills into waste disposal system or pick up with an oil absorbent.

NEUTRALIZING CHEMICALS

WASTE DISPOSAL METHOD

Non-biodegradable components of used emulsions must be removed prior to disposal. This may be accomplished by treating the used emulsion with acid-alum or alum-polymeri deemulsifiers and decanting off the oil split.

VIII SPECIAL PROTECTION INFORMATION

VENTILATION REQUIREMENTS

If product is sprayed or if misting occurs, provide local ventilation.

RESPIRATORY (SPECIFY IN DETAIL)

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT In the event of misting, use NIOSH approved respiratory equipment with TC-21C-140 cartridge combination.

face shield or goggles when handling concentrate.

GLOVES

None

OTHER CLOTHING AND EQUIPMENT

None

ATAG YTIVITOAMA W

IX SPECIAL PRECAUTIONS OF THE PROPERTY OF THE

PRECAUTIONARY STATEMENTS

208 00524

The constitution of the state o ានអ្នកស្រាស់ស្គ្រាស្ត្រីស្ត្រី មានប្រ

Paragon Office of

The second section of the second second

The state of the s

2 64.5 70

and the same of the contraction

OTHER HANDLING AND STORAGE REQUIREMENTS

Do not take internally. Avoid contact with eyes. Avoid breathing mists. Wash contaminated clothing before reuse. Keep drums closed when not in use. Bring product to room temperature prior to use.

S.B.Hogenboom/cw Metal Forming Chemist

PREPARED BY.

Van Straaten Chemical Co.

ADDRESS.

630 W. Washington Blvd. Chicago, 111, 60606

4/1/81 CATLE

879:1M:W14



CHEMICALS . EQUIPMENT . HEALTH PRODUCTS

Double Action Stratch pross

)

June 4, 1984

Mr. Ray Gamble CAMPCO STEEL 57533 County Road 3 South Elkhart, IN 46517

Dear Mr. Gamble:

It was good speaking with you May 25th regarding the composition and disposal of our DP 1212.

Our product contains, in decreasing order of concentration, calcium carbonate and water (these two ingredients account for two-thirds of the product's composition), plus surfactants and soaps, 0.1% pine oil and less than 0.05% combined total of 4-(2-nitro-butyl) morpholine and 4-4 - (2-ethyl-2-nitrotrimethylene) dimorpholine as a preservative.

The neat product has a BOD $_5$ day of 405,000 mg/L and a COD of 727,000 mg/L. It is not regarded as a hazardous waste water RCRA and is coded 0-0-0 under the NFPA system.

This information should be sufficient for disposal. If SCA Chemical Service needs more information regarding the ten drums of waste, they may, of course, call me directly.

I hope this has been of help. If I can do anything else, please don't hesitate to call.

Sincerely,

Charles Matlack

Product Safety Coordinator

CJM:1c

⊠l5	TIMME	MATERIA "ESSENTI	ALLY SIMILAR			EET	ADDRESS: Pennwalt Corporation 900 First Avenue King Of Brussia PA 1940
	Pennwalt	Product Name	a Tital Arter in the		Pennwalt C	ode No.	King of Brussia, PA 1940
<u>ō</u>	D	2 1212	<u></u>		CS 62	72	Emergency Phone Number(s)
PRODUCT DENTIFICATION	Chemical	Name and Molecular For	mula				Business: (215): 337-6639 Other:
8 5						Ţ	CAS No.(1)
IDE	Synonym						Cnemical Family Lubricant
		MATERIAL	S OR COMPONE	NTS		* w/w	HAZARO DATA (TLV, LO50, LC50, «tc.)
HAZARDOUS INGREDIENTS				· **			Chuck mothack
				,	X Comment		
SHIPPING	f Di	ry, Liquid o	Paste,	NOI		/; 133; 200 3 3 *********************************	ring or Drilling;
	Bolling Po	Int/Range	Meiting Point	ិត្ត ខែ្រីន	J - S - F	reezing Point	"C 30 °F Mixture
L E	Specific C	°C °C °C	FI	Vapor Pressui		y 3 -4	°C 30 °F Mixture
PHYSICAL PROPERTIES	Specific o		:/25, ₀ °C			℃	*F
<u> </u>	Solubility		% Volatiles b			vaporation Ra	
돌호		omplete	COTES	ී සි සැක යේ • • • • • • • • • • • • • • • • • • •	341 GET 1	1 701	Ether = 1 Water = 1 W Butylacetate
- =		e and Odor			0	tner	
	So	oft smooth of	paque pas	te	<u> </u>	<u>.</u>	<u> </u>
-	Flash Pol	it	Test Method	Flammable L			Autolgnition Temperature/Fire Point
ATA	·	°C °F		Lower	0/	pper	% °C °F
ے ہے	EXTING	JISHING MEDIA					
A S	Wat	Water-	Water	√ co₂	₩	Dry chemical .	Alcohol Foam Earth or
FIRE AN		FIRE FIGHTING PRO		T	70		1
E 5		not enter Allow f	وها ليا	iter may use frothing	Do not us	,,,	
X			elline	intamination	Temp	erature (Other (specify):
-	STABILI		more L.	NS CONTRIB			
ATA	X Stat	unstable	Therm decom		Photo degrad	•	Polymerization Contamination
REACTIVITY DATA	Stre	ATIBILITY - Avoid cont ong Strong alkajis	x Strong	ors 011	her lecify):		
≧	HAZAR	OUS DECOMPOSITION	PRODUCTS - T	HERMAL AND	OTHER (III	1)	
[\ \frac{1}{2}	Ther	mal - Oxides	of Carbo	n			· · · · · · · · · · · · · · · · · · ·
# H		ONS TO AVOID		-	"		
	He.	Open	Sparks	190	nition · urces	Other (specif	(y):
	! ~~	D BE TAKEN IF MATE	RIAL IS RELEA!		. 🗀:	Sweep or 1000	
œ		ır L29 or ine	rt material	Neutraliza		up and removi	
YLL OR LEAK] Lad Imn	cose of Other (speci					
SPILL	WASTE	SISPOSAL METHOD . C	onsult federal, st	ete, or local aut	horities for p	roper dispose	l procedures.
120							CONTINUED ON

NA - Not Applicable.

11

Material Safety Data Sheet

BOHAYAH BETTER



CARBON & ALLOY STEELS

Issue Date: November 25, 1985

I. PRODUCT IDENTIFICATION

Company: Nucor Steel - Darlington, P. O. Box 525, Darlington, S. C. 29532

Sugar A Section

John Mark

5. 2000

Trade Name (Common or Synonym): Carbon and Alloy Steels

Chemical Name: AISI/SAE Grades 10XX through 93XX, A-36, A-36M, A-572, A-441, A-242, A-588, A-675

Form: Angle, Channel, Round, Flat

or the motion

arent con in

Emergency Telephone: (803) 393-5841 or nearest Poison Control Center

II. PRODUCT INGREDIENTS

		rmen na svojih s	Expos	ure Limits
Material or Component	CAS Number	% Weight	OSHA PEL (mg/m³)	ACGIH TLV (mg/m³)
Base Metal				1
Iron (Fe)	7439-89-6	86.5-99.5	10 Oxide Fume	5 Oxide Fume
Alloying Elements		e studece. Rene I comprehense		日間存在できる。 Company S EC
Aluminum (Al)	7429-90-5	<0.1-0.5	Not Established	10 Dust/5 Fume
Bismuth (BI)	7440-69-9	<0.2-0.5	Not Established	Not Established
Boron (B)	7440-42-8	<.01-1.0	15 Oxide Fume	10 Oxide Furne
Carbon (C)	7440-44-0	<.10-1.5	Not Established	Not Established
Chromium (Cr)		⁵ 2.40-10 €	1.0 Chrome Metal	0.5 Chrome Metal
Columbium (Cb)	7440-25-7	₹.15-35	Not Established	Not Established
Copper (Cu)	7440-50-8	* < 30-1.90	0.1 Fume/1.0 Dust	0.2 Fume/1.0 Dust
Lead (Pb)	7439-92-1	<:01-15	.05 Dust & Fume	.15 Dust & Fume
Manganese (Mn)	7439-96-5	<.04-0.7	5c Dust/5c Fume	5c Dust/1 Fume
Molybdenum (Mo)	7439-98-7	<.15-1.10	15 Insoluble Compounds	10 Insoluble Compound
Nicke! (Ni)	7440-02-0	<.01-10	1 Nickel Metal	1 Nickel Metal
Phosphorous (P)	7723-14-0	<.04012	0.1 Phosphorous	0.1 Phosphorous
Silicon (Si)	7440-21-3	<.15-2.00	Not Established	10 Total Dust
Sulfur (S)	7704-34-9	<.05035	13 Sulfur Dioxide	5 Sulfur Dioxide
Vanadium (V)	7440-62-2	<.01-0.15	0.5c Dust/0.1c Fume	0.05 Dust/0.05 Furne

Note: The above listing is a summary of elements used in alloying steel. Various grades of steel will contain different combinations of these elements. Trace elements may also be present in minute amounts. No permissible exposure limits (PEL) or threshold limit values (TLV) exist for steel. Values shown are applicable to component elements.

III. PHYSICAL DATA

Physical Form: Solid under normal conditions

Appearance & Odor: Gray-black or Silver-gray odorless metal

Specific Gravity (H 2 0 = 1): Approx. 7

Melting Point: Approx. 2800°F

Solubility in Water: (% by weight): Not applicable

Boiling Point: Not applicable Vapor Pressure: Not applicable Vapor Density: Not applicable Acidity/Alkalinity: Not applicable % Volitile by Volume: Not applicable

IV. FIRE AND EXPLOSION DATA

Flash Point: Not applicable – Auto-Ignition Temperature: Not applicable – Flammable Limits in Air: Not applicable Fire & Explosion Hazards-Extinguishing Media: Steel bars and tubular products do not present fire or explosion hazards under normal conditions. Use fire fighting methods and materials that are appropriate for surrounding fire.

Fine metal particles, such as produced in grinding and sawing, can burn. High concentration of metallic lines in the air may present an explosion hazard. Molten metal may explode on contact with water. For these fires, use dry powder or sand extinguishing media.

Material Safety

E lake Compa

S. 5 8 10 6 11

interior.

Want & Want

11.46,65

Place Research (No. 4 non de Bynone Ottober of Mange 19 (19 et douget to the

1. 100

1.00

to some one of

KALCO FOR

the salas parts

July Fred French

VALENVIRONMENTAL HEALTH & SAFETY INFORMATION

Steel products in their solid state present no inhalation, ingestion, or contact health hazard. Operations such as burning, welding, sawing, brazing, grinding, and machining, which result in elevating the temperature of the product to, or above its melting point, or result in the generation of airborne particulates may present hazards. The major exposure hazard is inhalation. Effects of overexposure to furne and dust are as follows:

Acute: Excessive inhalation of metallic fumes and dusts may result in irritation of eyes, nose and throat. High concentrations of fumes and dusts of iron-oxide, manganese, copper, zinc, and lead may result in metal fume fever. Typical symptoms last from 12 to 48 hours and consist of a metallic taste in the mouth, dryness and irritation of the throat, chills and fever

Chronic: Chronic and prolonged inhalation of high concentrations of furnes or dust of the following elements may lead to the conditions listed opposite the element: neighbor O been mouth to any a o

Aluminum: May initiate fibrotic changes to lung tissue

Bismuth: No chronic debilitating symptoms indicated

Boron: No chronic debilitating symptoms indicated

Chromium: Lesions of the skin and mucous membranes, possibly cancer of the nose or lungs-bronchogenic carcinoma

Copper: No chronic debilitating symptoms indicated

Iron: Siderosis, pulmonary effects. No chronic debilitating symptoms indicated

Lead: Anemia, urinary dysfunction, weakness, constipation, nausea, nervous disorder

Manganese: Bronchitis, pneumonitis, lack of coordination

Molybdenum: Respiratory tract irritation, possible liver and kidney damage, bone deformity

Nickel: Lesions of the skin and mucous membranes, possibly cancer of the nose or lungs-bronchogenic carcinoma

Phosphorous: Necrosis of the mandible

Sulfur (as sulfur dioxide): Edema of the lungs

Vanadium: (As vanadium pentoxide) Emphysema, pneumonia

Zinc: Gastrointestinal inflamation reported in animal studies

Occupational Exposure Limits: See products Ingredients Section II. Chromium and Nickel have been identified by the International Agency for Research on Cancer (IARC) and/or the National Toxicology Program (NTP) as potential cancer causing agents. Bejasous*

EMERGENCY MEDICAL PROCEDURES:

Inhalation: Remove to fresh air; if condition continues, consult a physician.

Eye Contact: Flush thoroughly with running water to remove particulate; obtain medical attention.

Skin Contact: Remove particles by washing thoroughly with soap and water. Seek medical attention if condition persists.

Ingestion: If significant amounts of metal are ingested, consult physician.

OCCUPATIONAL PROTECTIVE MEASURES:

Respiratory Protection: Appropriate dust/mist/fume respirator should be used to avoid excessive inhalation of particulates. If exposure limits are reached or exceeded, use NIOSH approved equipment.

Hands, Arms, and Body: Protective gloves should be worn as required for welding, burning or handling operations.

Eyes and Face: Safety glasses should be worn when grinding or cutting.

Face shields should be worn when welding or burning.

Other Clothing and Equipment: As required depending on operations and safety codes.

REACTIVITY INFORMATION

Stability: Stable under normal conditions of use, storage and transportation.

Incompatibility (Materials to Avoid): Reacts with strong acids to form hydrogen gas.

Conditions to Avoid: Steel at temperatures above the melting point may liberate fumes containing oxides of iron and alloying elements. Avoid generation of airborn fume and dust.

SPILL, LEAK & DISPOSAL METHODS:

Fine turnings and small chips should be swept or vacuumed. Scrap metal can be reclaimed for reuse, Used or unused product should be disposed of in accordance with federal, state, or local laws and regulations.

ADDITIONAL PRECAUTIONS:

Minimize and control operations producing dust and fume.

Provide adequate exhaust ventilation and maintain good housekeeping.

DISCLAIMER

This MSDS is intended for use solely in safety education and environmental health training and not for specification purposes. The information in this MSDS was obtained from usually reliable sources and is provided without any representation or warranty, express or implied regarding the accuracy or correctness. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. Nucor Steel assumes no responsibility and expressly disclaims liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.

PREPARED BY DISTRIBUTOR:



A. M. CASTLE & CO. 3400 N. Wolf Road Franklin Park, IL 60131

MATERIAL SAFETY DATA SHEET

ISSUE DATE	November	25,	1955
REVISED		****	
		à	1 *

INFORMATION AND EMERGENCY NUMBER (312) 455-7111 (8am - 5pm Mon-Fri) (312) 455-8986 (After Hour Emergency)

SECTION 1 - PRODUCT IDENTIFICATION	
MANUFACTURER'S NAME Various	
PRODUCT NAME / TRADE NAME	COMMON NAME / GRADE
Stainless Steel	3XX Series, 4XX Series
SECTION 2 - HAZARDOUS INGREDIENTS	
NOTE PRODUCTS UNDER NORMAL CONDITIONS DO NOT REPRESENT AN INH	ALATION, INGESTION OR CONTACT HEALTH HAZARD
BASE METAL, ALLOYING ELEMENTS & COMPOSITIO AND METALLIC COATINGS & COMPOSITIO	N BY WEIGHT (1) ACGIH TLV (mg/m²) (2)
·	
Base Metal	to an
Iron (Fe) Alloying Elements	50-88 5 (As Iron Oxide)
	10-30 .5
Nickel (Ni)	0-27
Hanganese (Mn)	<pre>6</pre>
Molybdenum (Mo)	(6 10 (Insoluble Compound)
Copper (Cu) Titanium (Ti)	<pre><6</pre>
Treatrium (117)	<6 10 (Total Dust)
Carbon (C)	Kone Established
Phosphorus (P)	(2 None Established
Sulfur (S)	5 (As \$0 ₂)
	= <2 10 (Total Dust)
Cobalt (Co) Niobium (Nb)	<pre><2 .1 (Dust & Fume) </pre>
Nitrogen (N)	C2 None Established C2 6 (As NO ₂)
Tin (Sn)	(2 2
(1) % OF ALLOYING MATERIAL VARIES WITH GRADE OF MATERIAL.	(2) 1965-1986 ACGIH THRESHOLD LIMIT VALUE.
SECTION 3 - PHYSICAL DATA	T
MATERIAL IS (AT NORMAL CONDITIONS) SOlid	Gray-Black, Odorless
MELTING POINT (BASE METAL)	SPECIFIC GRAVITY
>2500	Annandaskal . 2
22300	Approximately 7
SECTION 4 - FIRE AND EXPLOSION	
EXTINGUISHING MEDIA	
NA NA	
SPECIAL FIRE FIGHTING PROCEDURES	
Steel products in the solid state pr	esent no fire or explosion hazard.
UNUSUAL FIRE AND EXPLOSION HAZARDS	
NA	
SECTION 5 - REACTIVITY DATA	
STABILITY	INCOMPATABILITY (MATERIALS TO AVOID)
Stable	Reacts with strong acids to produce hydrogen gas.
CONDITIONS TO AVOID NA	
HAZARDOUS DECOMPOSITION PRODUCTS	MAN AAA
welding, burning, grinding and possibly mach	Metallic dust or fumes may be produced during nining. Refer to ANSI 249.1

PRODUCT			
	Stainless	, 4	1 1 1 P
ľ			4

MAJOR EXPOSÚRE HÁZA	RD:			
⊠ INHALATION	SKIN CONTACT	SKIN ABSORPTION	EYE CONTACT	INGESTION
EFFECTS OF OVEREXPOSURE	~			
halation of h cause metal f	igh concentrations of	may produce irritation for freshly formed oxide zed by a metallic taste symptoms.	fumes or iron man	daneke and conner may
pneumoconiosi	s (siderosis). Inhai	trations of iron oxide lation of high concentr evelopment in workers o	ations of ferric o	ride may nossibly
as prepared by and fumes can	y the National Toxico cause sensitization	pounds are listed in th ology Program (NTP). E dermatitis, inflammati nasal passages and lun	exposure to high co on and/or ulcerati	ncentrations of dust
Recent epidemi chromium have	iological studies of found no increased i	workers melting and wo risk of cancer.	rking alloys conta	ining nickel/
immediately.	excessive levels	of metal fumes, remove least 15 minutes.	e to fresh air, s	eek medical aid
SECTION 7 - SPILL O	R LEAK PROCEDURES		· · · · · · · · · · · · · · · · · · ·	
SPILL OF LEAK PROCEDURES				
WASTE DISPOSAL METHODS				
According	to local, state an	nd federal regulations	S.	
SECTION 8 - SPECIAL	L PROTECTION			
-		nd fume, respirator s n exposure exceeds TL		avoid excessive in-
grinding (or machining when e	nould be utilized when exposure exceeds TLV's		, sawing, brazing,
eve protection and protecti Safety glass equipment sh	ses or googles shou	ld be utilized as req s required by the wel	uired by exposure ding standards.	. Other protective
SECTION 9 - SPECIA	L PRECAUTIONS			
		ild be taken for airbo	orne contaminants	which may originate
	g, precautions snou onents of the weldi			

The conditions or methods of handling storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.

Data sheets of individual manufacturers may be obtained by contacting A. M. Castle & Co., 3400 N. Wolf Road, Franklin Park, H. 60131 Attn: Corp. Safety Mgr

PREPARED BY DISTRIBUTOR: Castle Metals®

A. M. CASTLE & CO. 3400 N: Wolf Road Franklin Park, IL 60131

MATERIAL SAFETY DATA SHEET

ISSUE DATE	November	25,	1985	•
MEVISED				
a way pa	and an open strong parameter			

INFORMATION AND EMERGENCY NUMBER (312) 455-7111 (8am - 5pm Mon-Fri) (312) 455-8986 (After Hour Emergency)

440,430 (31 pt) 1	State of the state	se they with the second of the second
SECTION 1 - PRODUCT IDENTIFICATION		and the second s
MANUFACTURER'S NAME Various		
PRODUCT NAME / TRADE NAME Aluminum Alloys Aluminum Alloys Conta	ining Lead	1XXX thru 7XXX Series Leaded 2011 & 6262
SECTION 2 - HAZARDOUS INGREDIENTS		
NOTE. PRODUCTS UNDER NORMAL CONDITIONS DO NOT	REPRESENT AN INHALATION, INGEST	TION OR CONTACT HEALTH HAZARD.
BASE METAL, ALLOYING ELEMENTS AND METALLIC COATINGS	% COMPOSITION BY WEIGHT (1)	ACGIH TLV (mg/m³) (2)
·	•	
Base Metal		· · ·
Aluminum (Al)	80-99.7	10 (Metal & Oxide)
Alloying Elements	<10	1 (Dune + Mine)
	₹10	l (Dust & Mist) TO
Zinc (Zn)	<10	IO (Total Dust)
Cobalt (Co)	<2	l (Dust & Fume)
Iron (Fe)	<2	5 (As Iron Oxide)
Nanganese (Mn) Stlicon (Si)	기 등() 1 전 기 (12 기 기업) (2	10 (As Dust-Celling) 10 (Total Dust)-2
Tin (Sn)	<2	2
Chromium (Cr) Nickel (Ni)	₹.5 ↓ 5. ₹.5 .	and the contract of the second of the contract
Leaded Alloys 2011 & 6262	The second secon	المراجع الأنصار والمراجع المتحرومين وهوا بالمحجود المتحروب المحروب المراجع العراج المحروب المراجع والمدارات الأ والمراجع المحروب المراجع المتحرومين وهوا المحروب المتحروب المتحروب المحروب المحروب المحروب المحروب المتحروب ال
Lead (Pb)	ا در در ما ا دار در در	Signal (OSHA Lead Sed)
		and the second second
(1) % OF ALLOYING MATERIAL VARIES WITH GRADE OF MA	TERIAL (2) 1965-1966 AC	GIH THRESHOLD LIMIT VALUE.
SECTION 3 - PHYSICAL DATA	· · · · · · · · · · · · · · · · · · ·	
MATERIAL IS (AT NORMAL CONDITIONS)	APPEARANCE AN	Silver-Metallic, Odorless
Solid		
MELTING POINT (BASE METAL)	SPECIFIC GRAVIT	
440-1220	1.5	>2
SECTION 4 - FIRE AND EXPLOSION	<u> </u>	
EXTINGUISHING MEDIA		
Dry Powder (Class	D) or Sand	and the second of the second o
SPECIAL FIRE FIGHTING PROCEDURES		
Do not use water (or halogen on dust fir	es.
	in the second se	
UNUSUAL FIRE AND EXPLOSION HAZAROS	musly heat with libera	tion of hydrogen to form explosive
	n contact with water.	iction of hydrogen co form exprosive
SECTION 5 - REACTIVITY DATA		
STABILITY	I	Y (MATERIALS TO AVOID)
Stable	Anhyo	irous Bromine. Also see NFPA #491M
See Special Precau	tions. See	Fire and Explosion Section.
HAZARDOUS DECOMPOSITION PRODUCTS		
See Special Precau	tions. See	Fire and Explosion Section.
CM 0629-A 1 0 1 0 1 0 0	State of the state	

			4	
	PRODUCT	14 1		
ĺ		Aluminum		

NOTE: STEEL PRODUCTS IN THE BURNING, WELDING, SAW EXCEEDED	NATURAL STATE DO NOT	PRESENT AN INHALATION, INGES DING MAY RELEASE FUMES AND/C	TION OR CONTACT HAZARD OR DUSTS WHICH MAY PRESEN	HOWEVER, OPERATIONS SUCH AS IT HEALTH HAZARDS IF TLV'S ARE
MAJOR EXPOSURE HAZARD:	V 1.			
☑ INHALATION 🎦	SKIN CONTACT	SKIN ABSORPTION	EYE CONTACT	M INGESTION
EFFECTS OF OVEREXPOSURE				
Aluminum dust sho of eyes and respi welding, flame cu	ratory system. T tting, etc. on al X and 4145 wrough	a nuisance dust and he potential for overe loys containing high a t alloys. Overexposur fume fever.	exposure to copper f	ume may exist when
nickel and their the National Toxi	compounds are lis cology Program (N genic or health c	in certain alloys at l ted in the 3rd Annual TP). Their presence i oncern due to either t	Report on Carcinoge n Aluminum alloys	ns, as prepared by
toms of lead poise	oning include abd	rticles may result in ominal cramps, anemia, al changes, kidney dam	muscle weakness an	d headache Pro-
Plasma arc cuttin in mucous membrand and edema.	or welding alum irritation, as v	inum can generate ozon well as pulmonary chan	e. Overexposures t ges including irrit	o ozone can result ation, congestion
immediately."	cessive levels o	of metal fumes, remove	ve to fresh air, so	eek medical aid
SECTION 7 - SPILL OR LE				
SPILL OR LEAK PROCEDURES				
WASTE DISPOSAL METHODS According to	local, state and	d federal regulation	s.	
SECTION 8 - SPECIAL PR	OTECTION			
		nd fume, respirator s n exposure exceeds TL		avoid excessive in-
ventication Local exhaust yrinding or m	ventilation sho achining when ex	ould be utilized wher oposure exceeds TLV's	welding, burning	, sawing, brazing,
equipment shoul	or goggles shoul d be utilized as	d be utilized as req required by the wel	uired by exposure. ding standards.	Other protective
SECTION 9 - SPECIAL PR	ECAUTIONS			
2. 3.	hydrogen, in the presided aluminum will incly or vided aluminum will statures in air in the president rewelting aluminum scriss ammonium nitrate could cis ammonium nitrate sa well. Ho not touch cast aluminum ure. Aluminum experiences purns can result.	droxide in contact with aluminum solutions to the property of the property of the presence of	It will also form explosive online nitrate, lence of Strong oxidizers such to the collection of moisture to remeiting, sithout knowing metal tempera- if metal is not and touched,	
6.	The welding of aluminum all gen oxides, infra-red radia	oys may generate carbon monacide, tion and ultra-violet radiation.	 	

The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any representation or warranty, express or implied, regarding the accuracy or correctness.

The conditions or methods of handling storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.

Data sheets of individual manufacturers may be obtained by contacting A. M. Castle & Co., 3400 N. Wolf Roed, Franklin Park, IL 60131 Attn: Corp. Safety Mgr

U

PREPARED BY DISTRIBUTOR:



A. M. CASTLE & CO-3400 N. Wolf Road Franklin Park, IL 60131

MATERIAL SAFETY DATA SHEET

ISSUE DATE	November	25,	1985	·
REVISED				
Experience (progression out	e i landi tu li genta ti escilia se i cola più e i e			

INFORMATION AND EMERGENCY NUMBER (312) 455-7111 (8am - 5pm Mön-Fri) (312) 455-8986 (After Hour Emergency)

SECTION 1 - PRODUCT ID	DENTIFICATION			
MANUFACTURER'S NAME	VII S			
PRODUCT NAME / TRADE NAME	rbon Steel - HR	& CR	COMMON NAME / GRADE	Carbon Steel i.e. A36,1018,1010,1040 Pressure Vessel Quality
	aded Carbon	4 1 2 2 2		Leaded Carbon i.e. 10L42
SECTION 2 - HAZARDOUS	SINGREDIENTS	1		
NOTE PRODUCTS UNDER NORMAL		PRESENT AN INHAL	ATION, INGESTION OR	CONTACT HEALTH HAZARD.
BASE METAL, ALLOYING ELE AND METALLIC COATIN	MENTS	% COMPOSITION	BY WEIGHT (1)	ACGIH TLV (mg/m³) (2)
AND METALLIC COATTI	03			***************************************
•				
Base Metal				
Iron		97-99)	5 (As Iron Oxide)
Alloying Elements Manganese (Mn)	1	<2		5 (As Dust-Ceiling)
Carbon (C)	•	3		None Established
Aluminum (Al)		<1		10
Phosphorus (P)		<1		None for Inorganic
Sulfur (S) Silicon (Si)				5 (As SO ₂) 10 (Total Dust)
Vanadium (V)		λì		.05 (As Respirable Dust)
Colombian (Cb)		4		None Established
Bismuth (Bi) Lead Carbon i.e. 1	01.42	< 1 .	4. V. S.	None Established
Lead (Pb)	. 02.42	<1		.05 (OSHA Lead Std.)
		•		too (osma ceed see.)
(1) % OF ALLOYING MATERIAL VARI		RIAL. (2) 1965-1966 ACGIH THR	ESHOLD LILIT VALUE
MATERIAL IS IAT NORMAL CONDITIONS	3	1	APPEARANCE AND ODOR	
	Solid			Gray-Black, Odorless
MELTING POINT (BASE METAL)			SPECIFIC GRAVITY	
	>2500°			Approximately 7
	,2000	· 1		
SECTION 4 - FIRE AND EX	PLOSION			
EXTINGUISHING MEDIA		•		
SPECIAL FIRE FIGHTING PROCEDURES				
Steel produ	cts in the solid	state pres	ent no fire or	explosion hazard.
UNUSUAL FIRE AND EXPLOSION HAZARD	\$			
NA				
SECTION 5 - REACTIVITY	DATA			
Stable Stable			INCOMPATABILITY (MATER Reacts with	IALS TO AVOID) strong acids to produce hydrogen gas.
CONDITIONS TO AVOID NA		<u></u>		
HAZARDOUS DECOMPOSITION PRODUCT				
burning, grinding	Metal			produced during welding,

PRODUCT HOTUBERT DO

		•		Carbon
	ş weşe	74 74 C Ph. 4 A 1 Ph 19 19 19	2	TICLOTH WILE A
SECTION 6 - HEAL		DE TO THE THE WAS A STATE OF THE PARTY OF T		
NOTE: STEEL PRODUCT	IS IN THE NATURAL STATE DO NOT ING, SAWING, BRAZING AND GRIN	T PRESENT AN INHALATION, INGES IDING MAY RELEASE FUMES AND/C	STION OR CONTACT HAZARE OR DUSTS WHICH MAY PRESI). HOWEVER, OPERATIONS SUCH A ENT HEALTH HAZARDS IF TLV'S ARI
MAJOR EXPOSURE HA	ZARO:	· · ·		. C. D. Br
⊠ INHALATION	SKIN CONTACT	SKIN ABSORPTION	EYE CONTACT	INGESTION
EFFECTS OF OVEREXPOSURE		and the second s		
		Commence To Mario D		en e
Inhalation lead may ca and ir <u>ri</u> tat Chronic in	of high concentrations nuse metal fume fever, lion of the throat and nalation of high conce	t may produce irritations of freshly formed oxic characterized by a met influenza-like symptom	de fumes of iron, tallic taste in the is.	manganese, and mouth, dryness 1000 And Andreas
preumoconio	osis (siderosis). Inha	lation of high concent er development in worke	rations of ferrical	oxide may possib-
Inhalation Symptoms of	or ingestion of lead p flead poisoning includ	particles may result in de abdominal cramps, an ovioral changes, kidney	lead-induced syst memia. muscle weakn	emic toxicity.
				10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
EMERGENCY AND FIRST AID P				
_		of metal fumes, remov	ve to fresh air, s	seek medical aid
immediately		• ,		(Y) for body dia no besida
	h with water for at	least 15 minutes.		(14) district
	OR LEAK PROCEDURES			No. 20 April 1997
SPILL OR LEAK PROCEDURES	<u> </u>			
WASTE DISPOSAL METHODS			······	
Accordi	ng to local, state an	d federal regulation	S.	
SECTION 8 - SPEC	AL PROTECTION			
		nd fume, respirator s n exposure exceeds Tl		avoid excessive in-
grinding	or machining when e	ould be utilized wher xposure exceeds TLV's	n welding, burning	g, sawing, brazing,
EYE PROTECTION AND PROTE Safety gla	sses or goggles shou	ld be utilized as req s required by the wel	uired by exposure ding standards.	. Other protective

SECTION 9 - SPECIAL PRECAUTIONS

In welding, precautions should be taken for airborne contaminants which may originate from components of the welding rod.

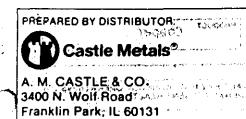
Arc or spark generated when welding or burning could be a source of ignition for combustable and flammable materials.

The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any representation or warranty, expres or implied, regarding the accuracy or correctness.

or implied, regarding the accuracy or correctness.

The conditions or methods of handling storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.

Data sheets of individual manufacturers may be obtained by contacting A. M. Castle & Co., 3400 N. Wolf Road, Franklin Park, IL 60131 Attn: Corp. Safety Mgr



MATERIAL SAFETY DATA SHEET

November 25, 1985

INFORMATION AND EMERGENCY NUMBER (312) 455-7111 (8am - Spm Mon-Fri) (312) 455-8986 (After Hour Emergency)

次者的主义 海岸战 路,1446. 1946. 1946. 1946. 1	ACCEPTED TO STATE	*.	
SECTION 1 - PRODUCT IDENTIFICATION			
MANUFACTURER'S NAME Various			
PRODUCT NAME / TRADE NAME COPPER - CR & H	R COMMON N	IAME / GRADE	and Short Annuary France Hand Statute
Copper Leadtex	Sheet		per Sheet, Oxygen Free, Hard Drawn ctrolytic Tough Pitch
The second of th	<u> </u>	<u> </u>	And the second s
SECTION 2 - HAZARDOUS INGREDIENTS	remember of		
NOTE PRODUCTS UNDER NORMAL CONDITIONS DO NOT RE BASE METAL, ALLOYING ELEMENTS		· · · · · · · · · · · · · · · · · · ·	
AND METALLIC COATINGS	% COMPOSITION BY WEIGH	r (1)	ACGIH TLV (mg/m³) (2)
		•	•
Copper (Cu)	:	>99.9	1 (Dust & Mist)
Trace Less Than .1% Phosphorus, Antimony, S Bismuth	ielenium		
Coating - Leadtex	Description (1)		Angle Angle Company
Lead (Pb)	15 lbs	./100 sq ft	.05 (OSHA Lead Std.)
and the second s			
en e			Strand Head Chapter (Albertail) in The Chapter (Albertail)
		•	
(1) % OF ALLÖYING MATERIAL VARIES WITH GRADE OF MATE	RIAL. (2) 1965-196	6 ACGIH THRESHC	OLD LIMIT VALUE
SECTION 3 - PHYSICAL DATA			
MATERIAL IS (AT NORMAL CONDITIONS)	APPEARANC	COP	oper Metallic, Odorless
MELTING POINT (BASE METAL)	SPECIFIC G	RAVITY	
>1800°		>8	•
SECTION 4 - FIRE AND EXPLOSION			
EXTINGUISHING MEDIA NA		14	
SPECIAL FIRE FIGHTING PROCEDURES			
Products in the solid	state present no f	fire or expl	osion hazard.
UNUSUAL FIRE AND EXPLOSION HAZARDS			
Dust hazard exists under favoring and strong ignition source may r	g conditions of sm esult in an explos	all practice	e _s size. Dispersion in air
SECTION 5 - REACTIVITY DATA	, ,		. M
Stable	INCOMPATA	Mercury	o Avoio) , Ammonia, Acetylene, Acids
Exposure during stora	ge to strong acids	, bases or	oxidizing agents.
HAZARDOUS DECOMPOSITION PRODUCTS Toxic gas ing copper alloys if fumes of other	es, aerosols and v compounds or other	apors may b contacting	e released in a fire involv- materials are involved.
CM 0629-A			

TAO NOS. PRODUCT Copper SECTION 6 - HEALTH HAZARD DATA *

NOTE: STEEL PRODUCTS BURNING/WELDIN EXCEDED	IN THE NATURAL STATE DO NO IG, SAWING, BRAZING AND GRIN	T PRESENT AN INHALATION, INGES IDING MAY RELEASE FUMES AND/O	TION OR CONTACT HAZARD OR DUSTS WHICH MAY PRESE	HOWEVER OPERATIONS SUCH AS NT HEALTH HAZARDS IF TUV'S ARE
MAJOR EXPOSURE HAZ	ARDS 38% V			
⊠ INHALATION	SKIN CONTACT	SKIN ABSORPTION	EYE CONTACT	M INGESTION
EFFECTS OF OVEREXPOSURE		The second secon	The state of the s	JAMAN D. C. M. C.
Inhalation_of cause_metal_fu	oosure to fumes/dust high_concentrations we_fever_characteri ifnfluenza-like_sym	may produce irritation of freshly formed on zed by a metallic tas	cide fumes of copp ste in the mouth a	er and lead may
Inhalation or Symptoms of le	ingestion of lead pead poisoning includ	earticles may result in le abdominal cramps, a vioral changes, kidne	in léad-induced sy inemia, muscle wea	kness and headache.
		i de de en la companya de de en la companya de e	e te ye est sabe as e	er New York (1985) Description Description
EMERGENCY AND FIRST AID PRO		of matal fumos momos	o to from the	
immediately.	O exceptive level?	of metal fumes, remov	re to fresh air, s	eek medical aid
	$eta \in \mathcal{C}(0, \mathbb{R}^3)$ with water for at		C.	() gend
	OR LEAK PROCEDURES			
SPILL OR LEAK PROCEDURES				
WASTE DISPOSAL METHODS				
Accordin	g to local, state ar	nd federal regulation:	s.	
SECTION 8 - SPECIA	AL PROTECTION	grade and the second	astropista in the second second	unik de de julius de kenjulijk e
RESPIRATORY NIUSH/MSH	A - Approved dust a	nd fume, respirator s n exposure exceeds TL		avoid excessive in-
grinding	or machining when e	ould be utilized when xposure exceeds TLV's		, sawing, brazing,
EVERNOTECTION AND PROTECTION SAfety glass equipment s	ses or goggles shou	ld be utilized as req s required by the wel	uired by exposure ding standards.	. Other protective
SECTION 9 - SPECIA				
		$(\mathbf{w}_{i}, \mathbf{w}_{i}, w$, , ,
from comp	onents of the weldi	1. The company of the Maria School	rne contaminants i	
Arc.or sp	park generated when ple and flammable ma	welding or burning co	ould be a source o	f ignition for

The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any representation or warranty, express or implied, regarding the accuracy or correctness.

The conditions or methods of handling storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.

Data sheets of individual manufacturers may be obtained by contacting A. M. Castle & Co., 3400 N. Wolf Road, Franklin Park, tt. 80131 Attn: Corp. Safety Mgr.

PREPARED BY DISTRIBUTO	₹:
Castle Metals	0
A. M. CASTLE & CO.	
3400 N. Wolf Road	
Franklin Park, IL 60131	

MATERIAL SAFETY DATA SHEET

Section 1 Contraction

ISSUE DATE	November	25,	1985
REVISED もヴェウテム	V.X-1 14 2 21		(1) (1) (1)
2 1881 50	7 7 7 7 7		7-

INFORMATION AND EMERGENCY NUMBER (312) 455-7111 (8am - 5pm Mon-Fri) (312) 455-8966 (After Hour Emergency)

MANUFACTURER'S NAME	/arious				
PRODUCT NAME / TRADE NAME	-	Steel - HR & CR Leaded Steel	COMMON NAME	Alloy.	Steel i.e. 4130,4140,4340,8620 Leaded i.e. 86L20
SECTION 2 - HAZARD			100 F 30		
		ONS DO NOT REPRESENT AN INH	ALATION, INGEST	ION OR CO	ONTACT HEALTH HAZARD.
BASE METAL, ALLOYIN AND METALLIC CO	IG ELEMENTS DATINGS	% COMPOSITIO	N BY WEIGHT (1)		ACGIH TLV (mg/m²) (2)
	_				
Base Metal Iron (Alloying B	(Fe)	i e	86-99	•	5 (As Iron Oxide)
Nickel	1 (N1)		<5		1_
	lum (Cr) on (Si)		<5 <5		.5 10 (Total Dust)
	nese (Mn)		<2		5 (As Dust-Ceiling)
Carbon Molybo	ı (С) Jenum (Mo)	e de la	<2 <2		None Established () 10 (Insoluble Compound)
Vanedi	ium (Y) 🌷	The state of the s	′′ <2 ′′′		10 (Total Dust)
Alumin Sulfur	ոստ (Al) r (S)		<2 <2		10 5 (As SO ₂)
	, ,	. 1. 3	1 1 1 1 m	f 10	in the second of
	norus (P) th (Bi)		(1	2/34/3	None Established
Copper	r (Ću)		<1		l (Dust & Mist)
Leaded All Lead ((1		.05 (OSHA Lead Std.)
		· · ·			
					•
(1) % OF ALLOYING MATERIAL	VARIES WITH O	SRADE OF MATERIAL.	(2) 1985-1986 AC	GIH THRES	SHOLD LIP4IT VALUE
SECTION 3 - PHYSICA			1		
MATERIAL IS (AT NORMAL COND	(TIONS)	olid	APPEARANCE AN	D ODOR	Gray-Black, Odorless
MELTING POINT (BASE METAL)			SPECIFIC GRAVIT	Y	
	>2	500°	·		Approximately 7
SECTION 4 - FIRE AN	D EXPLOSI	ON			
EXTINGUISHING MEDIA			. :		
SPECIAL FINE FIGHTING PROCEDU	MES				
1		s in the solid state	present no	fire	or explosion hazard.
UNUSUAL FIRE AND EXPLOSION H	AZAROS				<u></u>
NA					
SECTION 5 - REACTIV	VITY DATA		·		
Stable Stable			Reacts		us to avoid) ong acids to provide hydrogen gas.
CONDITIONS TO AVOID NA					
Metallic dust machining.	t or fumes	s may be produced dur	ing weldin	ig, buri	ning, grinding and possibly
CM 0829-A					

PRODUCT	411	
	Alloy	
<u> </u>		

		•		i	Alloy	+ 5
		1		<u> </u>		
SECTION 6	- HEAL1	H HAZARD DATA	of a de la late of the	x 到 范蠡		
NOTE: STEEL BURN EXCEL	PRODUCTS ING, WELDII	S IN THE NATURAL STATE DO NOT NG. SAWING, BRAZING AND GRIN	PRESENT AN INHALATION INGE DING MAY RELEASE FUMES AND/	STION OR CONTACT HAZARD. OR DUSTS WHICH MAY PRESE	HOWEVER, OPER NT HEALTH HAZA	ATIONS SUCH AS ROS IF TLV'S ARE
MAJOR EXPO	SURE HAZ	ARD:				
M INHALAT	ION	SKIN CONTACT	SKIN ABSORPTION	EYE CONTACT	1 INGES	TION
EFFECTS OF OVER	REXPOSURE					
	lead maj irritati Chronic pneumocc enhance Inhalati toms of	oy cause metal fume fever, or cause metal fume fever, in of the throat and infliction of high concentrations; (siderosis). Inhalation of lung cancer do on or ingestion of lead palead poisoning include abores.	trations of iron oxide fund lation of high concentration evelopment in workers expo- enticles may result in lead dominal cramps. agenca mus	es of iron, manganese, of taste in the mouth, described to consider may lead to come of feric oxide may pased to pulmonary carcing induced systemic toxics.	copper and ryness and a benign cossibly ogens.	
	Chromium as prepa dust and	and nickel and their comp red by the National Toxico	counds are listed in the 3r plogy Program (NTP). Expos stion dermatitus, inflammat ter of nasal passages and	d Annual Report on card oure to high concentration	inogens,	
	Recent e		workers melting and working	-	kel/	

If exposed to excessive levels of metal fumes, remove to fresh air, seek medical aid immediately.

Eyes - Flush with water for at least 15 minutes.

SECTION 7 - SPILL OR LEAK PROCEDURES

SPILL OR LEAK PROCEDURES

WASTE DISPOSAL METHODS

According to local, state and federal regulations.

SECTION 8 - SPECIAL PROTECTION

RESPIRATORY NIOSH/MSHA - Approved dust and fume, respirator should be used to avoid excessive inhalation of particulates when exposure exceeds TLV's.

ł

Local exhaust ventilation should be utilized when welding, burning, sawing, brazing, grinding or machining when exposure exceeds TLV's.

Safety glasses or goggles should be utilized as required by exposure. Other protective equipment should be utilized as required by the welding standards.

SECTION 9 - SPECIAL PRECAUTIONS

In welding, precautions should be taken for airborne contaminants which may originate from components of the welding rod.

Arc or spark generated when welding or burning could be a source of ignition for combustable and flammable materials.

The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any representation or warranty, express or implied, regarding the accuracy or correctness.

The conditions or methods of handling storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume reaponsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.

Data sheets of individual manufacturers may be obtained by contacting A. M. Castle & Co., 3400 N. Wolf Road, Franklin Park, II, 80131 Attn: Corp. Safety Mgr



ELKHART STEEL SERVICE, INC.

23321 COUNTY ROAD 108 - ELKHART, INDIANA 46514-9786 - PHONE (219) 262-2552

Material Safety Data Sheet

Company	legus Date	Identification Number
Elkhart Steel Service Inc. 23321 County Road 106 Elkhart, IN 46514	November 21, 1985	C Alloy & Tool
Trade Name (Common Name of Synonym) Carbon, Alloy, and Tool Steels	Emergency Phone Number (219) 262 - 2552	
Chemical Nerve Steel	Bar, Sheet, Plate, Tubing,	Structurals, and Forgings

I. INGREDIENTS

Material or Component	CAS Number	46 Weight	Exposur	e Limits
Base Metal			OSHA PEL (mg/m²)	ACGIH TLV (mg/m³)
Iron (Fe)	7439-89-6	Balance	10 (Fe ₂ O ₃ Fume)	5.0 (Fe ₂ O ₃ Fume)
Alloying Elements			1	,
Aluminum (Al)	7429-90-5	0.10 - 1.8	None Listed	5.0 as welding fume
Carbon (C)	7440-44-0	0.01 - 1.5	None Listed	None Listed
Chromium (Cr)	7440-47-3	0.01 - 12	1.0 as chrome	0.5 as chrome
Cobalt (Co)	7440 -48-4	8 Max.	0.1 as cobalt and fume	0.05 as fume
Copper (Cu)	7440-50-8	0.04 - 0.7	0.2 as copper; 1.0 as dust	- 0.2 as fume; 1.0 as dust
Lead (Pb)	7439-92-1	0.15 - 0.35	0.05 as fume & dust	0.15 as dust and fume
Manganese (Mn)	7439-96-5	0.05 - 2.0	5 as manganese	5 as dust; 1 as fume
Molybdenum (Mo)	74 39-98 -7	0.01 - 1.10	15 as insoluble compds	10 as insoluble compd
Nickel (Ni)	7440-02-0	0.01 - 10	1.0 as Nickel	1.0 as Nickel
Phosphorous (P)	7723-14-0	0.15 Max	0.1 as Phosphorous	0.1 as Phosphorous
Silicon (SI)	7440-21-3	0.15 - 2.20	None Listed	10 total dust
Sulfur (S)	7704-34-9	0.001 - 0.35	13 sulfur dioxide	5 sulfür dioxide
Tungsten (W)	7440-33-7	0 - 18	None Listed	5 insoluble compds
Vanadium (V)	7 440-82- 2	0.01 - 1.0	0.5 dust; 0.1 fume	0.05 dust and fume
Zinc (Zn) coating	1314-13-2	10 Max	5.0 as fume	5.0 as fume

Note: The above listing is a summary of elements used in alloying steel. Various grades of steel will contain different combinations of these elements. Trace elements may also be present in minute amounts.

II. PHYSICAL DATA

Material is (At Normal Condit	ions):				Appearance and Odor	
☐ Liquid		Solid 🔲	Gas	☐ Other	Gray-Black With Metallic Lus	tre - Odorless
AcidhylAlkalinity			Approx	V		Vapor Pressure
'	,	Melting Point	2750°F	•	avity (H ₂ O = 1) 7	(mm Hg at 20°C)
ph = NA		Boiling Point	NA °F	Solubility in	water (% by weight) — NA	NA

III. PERSONAL PROTECTIVE EQUIPMENT

NIOSH approved dust/mist/fume respirator should be used during welding or burning if OSHA PEL or TLV is exceeded.	Hands, Arms, and Body Use appropriate protective clothing such as welders aprons & gloves when welding or burning. Check local codes.
Eyes and Face	Other Clothing and Equipment
Safety glasses should always be worn when grinding or cutting;	As required
face shields should be worn when welding or burning.	

IV. EMERGENCY MEDICAL PROCEDURES

Inhalation:	Remove to fresh air; if condition continues, consult physician.				
Eye Contact:	Immediately flush well with running water to remove particulate; get medical attention.				
Skin Contact:	If irritation develops, remove clothing and wash well with soap and water. If condition persists, seek medical attention.				
Ingestion:	if significant amounts of metal are ingested, seek medical attention.				

V. HEALTH/SAFETY INFORMATION



HEALTH

Steel products in the natural state do not present an inhalation, ingestion, or contact health hazard. However, operations such as welding, burning, sawing, brazing, grinding, and possibly machining, which results in elevating the temperature of the product to or above its melting point or results in the generation of airborne particulates may present hazards. The above operations should be performed in well ventilated areas. The major exposure hazard is inhalation.

Effects of overexposure are as follows:

Acute: Excessive inhalation of metallic fumes and dusts may result in irritation of eyes, nose, and throat. Also high concentrations of fumes and dusts of iron-oxide, manganese, copper, zinc, & lead may result in metal fume fever, Typical symptoms consist of a metallic taste in the mouth, dryness and irritation of the throat, chills and fever, and usually last from 12 to 48 hours.

Chronic: Chronic and prolonged inhalation of high concentrations of fumes or dust of the following elements may lead to the conditions listed opposite the element:

Iron (iron-oxide) - Pulmonary effects, siderosis.

Manganese - Bronchitis, pneumonitis, lack of coordination.

Chromium - Various forms of dermatitis, inflammation and/or ulceration of upper respiratory tract, and possibly cancer of nasal passages and lungs. Based on available information, there does not appear to be any evidence that exposure to welding fume induces human cancer.

Nickel - SAME AS CHROMIUM.

Copper - Pulmonary effects.

Vanadium - No reported cases of exposure to vanadium.

Cobalt - Inhalation of cobalt dust may cause an asthma-like disease with cough and dyspnea.

Molybdenum - Pain in joints, hands, knees and feet.

Tungsten - Some evidence of pulmonary involvement such as cough.

Lead - Prolonged exposures can cause behavioral changes, kidney damage, periphery neuropathy characterized by decreased hand-grip strength and adverse reproductive effects.

decre ⊌Zinc - None r	esed nand-grip streng reported.	th and adver	se reproductiv	e enects	•	TOWNS PROPERTY.	
Occupational Exposure Limits See Section I.			.e			Onorthe Control	
etienius s		FIRE AND	EXPLOSIO	N	5 1 1 1 M	(2) TON.	1
Flash Point NA °F	Auto Ignition Temperature	°F		M %	Extrapolating Media	NA man (all)	
Fire and Explosion Hazards	None			Extingue	ring Media Net to be Used N	in the Waster of the color IA security	_
,		REA	CTIVITY	•			_
Stable Unstab	incompetibility (Meter	•	to form hyd	rogen g	as.		
Non-ventilated areas who	en cutting, welding,	Keep Area burning, or	Well Ventils brazing; avo	ted id gene	ration of airborne	e dusts and fumes.	
Hazardous Decomposition Products Metallic Oxides.							

VI. ENVIRONMENTAL

Spet or leak procedures	Special Precautions: Use good housekeeping practices to prevent accumulation o airborne dust to a minimum.	f dust and to keep
Waste Disposal Method Dust, etc. — fol	low federal, state, and local regulations regarding disposal.	

VII. ADDITIONAL INFORMATION

Disclaime

ĺΨ

The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any representation or warranty, express or implied regarding the accuracy or correctness. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.



MATERIAL SAFETY DATA SHEET STEEL PRODUCTS

USS CODE NO._

INFORMATION & EMERGENCY TELEPHONE NUMBERS

(412) 433-6840 (8 a.m. — 5 p.m., Mon.-Fri.) (412) 433-5811 (Off Hour Emergencies)

ORIGINAL ISSUE DATE: 8/1/35 REVISED:

I. IDENTIFICATION

PRODUCT NAME: Galvanized Sheet-Carbon Steel

(Hot Dipped)

COMMON NAME(S): Same

CAS NO.: 65997-19-5

MANUFACTURER:

U.S. Steel Corporation

P. O. Box 206 (MSDS) Pittsburgh, PA 15230

II. INGREDIENTS AND RECOMMENDED OCCUPATIONAL EXPOSURE LIMITS

NOTE: Steel products under normal conditions do not present an inhabition, injection or contact health hazard (See Section VI.).

BASE METAL, ALLOYING		EXPOS	EXPOSURE LIMITS			
METALLIC COATINGS	% WEIGHT	OSHA PEL	ACGIH TLV			
Base Metal: Iron	Balance	10 mg/H ³ for iron oxide fume	5 mg/M ³ for iron exide fune			
Alloying Elements: Carbon	.005/.60	None established	None established			
Manganese	.05/1.50	(c) 5 mg/H ³	(c) 5 mg/H ³ -dust 1 mg/H ³ -fume			
Phospharus	.15 max	None for inorganic phosphates	None for inorganic phosphates			
Sulfur	.05 max	13 mg/H ³ as SO ₂	5 mg/H ³ as SO ₂			
Aluminum ·	.10 max	None established	10 mg/H ³			
Metallic Coating: Zinc	8.5/9.9	5 mg/H ³	10 mg/H ³ -Total ZnO dust 5 mg/H ³ -Respirable ZnO dust & fume			
Aluminum	0.04 max	None established	10 mg/m ³			
Antimony	0.02 max	0.5 mg/H ³	0.5 mg/H ³			
Lead	0.02 max	0.05 mg/H ³	0.15 mg/H ³			
Iron	0.1/1.5	10 mg/H ³ for iron oxide fume	5 mg/M ³ for iron oxide fume			
		(c) denotes "ceiling limit" which	is not to be exceeded at any time			
Oil coating may be used	· see Anney II					
Off coacting may be used	, see Almex 11					

NOTE: All commercial metals contain small amounts of various elements in addition to those specified. These small quantities, frequently referred to as "trace" or "residual" elements, generally originate in the raw materials used. Typical levels of commonly involved trace or residual elements that may be encountered in steel products are provided in Annex I so that their potential hazards may be considered.

THE CONTRACTOR OF STREET AND ADDRESS.

III. PHYSICAL DATA

MELTING POINT 2750° F BASE METAL:

METALLIC COATING:

800-900°

APPEARANCE AND ODOR:

Metallic Gray. No Odor

IV. FIRE AND EXPLOSION HAZARD DATA

STEEL PRODUCTS IN THE SOLID STATE PRESENT NO FIRE OR EXPLOSION HAZARD.

V. REACTIVITY DATA

Stable under normal conditions of use, storage, and transport! Will react with strong acid to liberate hydrogen. At temperatures above the melting point of the coating, may liberate zinc funes.

VI. HEALTH HAZARD DATA	
	inhalation, ingestion or contact health hazard, however, operations, such as hining, etc., which results in elevating the temperature of the product to of above-culates, may present health hazards.
FFECTS OF OVEREXPOSURE:	MAJOR EXPOSURE HAZARD
	INHALA. SKIN EYE CONTACT INGESTION
	ons of iron oxide fumes or dusts may lead to a ation of high concentrations of ferric oxide cer development in workers exposed to
Manganese, Copper, Lead and/or Zinc in th influenza-like illness termed metal fume	of freshly formed oxide fumes and dusts of the respirable particle size range can cause an fever. Typical symptoms last 12 to 48 hours on the mouth, dryness and irritation of the fever and chills.
remove exposed person to fresh air. If by ter artificial respiration or oxygen as in	overexposure to airborne fumes and particulates, reathing is difficult or has stopped, adminis- ndicated. Seek medical attention promptly. dminister a pain and fever reducing medication.
VII. SPILL OR LEAK PROCEDURES	Printed Assert to the control of the
NOT APPLICABLE TO STEEL IN THE SOLID STATE.	
III. SPECIAL PROTECTION INFORMATION	
RESPIRATORY: NIOSH/MSHA-approved dust and fume particulates. Appropriate respirator selection depend	e respirators should be used to avoid excessive inhalation of is on the magnitude of exposure.
SKIN: Protective gloves should be worn as required for weldi	ng, burning or handling operations.
EYE: Use safety glasses or goggles as required for welding.	burning, sawing, brazing, grinding or machining operations.
VENTILATION: Local exhaust ventilation should be machining to prevent excessive dust or fume exposure.	provided when welding, burning, sawing, brazing, grinding or
OTHER PROTECTIVE EQUIPMENT: Depending upon the conditions of use and specific we may be required to control exposures.	ork situations, additional protective equipment and/or clothing
IX. SPECIAL PRECAUTIONS	
lates should be evaluated and controlled a or dusts.	RAGE: rating high concentrations of airborne particu- as necessary. Avoid breathing metal fumes and/
OTHER COMMENTS:	

THIS INFORMATION IS TAKEN FROM SOURCES OR BASED UPON DATA BELIEVED TO BE RELIABLE: HOWEVER, UNITED STATES STEEL CORPORATION MAKES NO WARRANTY AS TO THE ABSOLUTE CORRECTNESS OR SUFFICIENCY UF ANY OF THE FOREGOING OR THAT ADDITIONAL OR OTHER MEASURES MAY NOT BE REQUIRED UNDER PARTICULAR CONDITIONS.

No additional comments are believed to be necessary for this product.

l

USS node No. 30012



MATERIAL SAFETY DATA SHEET

STEEL PRODUCTS

USS CODE NO.

ORIGINAL ISSUE DATE: 8/1/85 REVISED:

I. IDENTIFICATION

COMMON NAME(S): Same

CAS NO.: 65997-19-5

PRODUCT NAME: Galvanized Sheet - Electrolytic

INFORMATION & EMERGENCY TELEPHONE NUMBERS (412) 433-6840 (8 a.m. - 5 p.m., Mon.·Fri.) (412) 433-5811 (Off Hour Emergencies)

> MANUFACTURER: U. S. Steel Corporation P. O. Box 206 (MSDS) Pittsburgh, PA 15230

II. INGREDIENTS AND RECOMMENDED OCCUPATIONAL EXPOSURE LIMITS

BASE METAL, ALLOYING		EXPOSUR	EXPOSURE LIMITS				
ELEMENTS AND METALLIC COATINGS	X WEIGHT	OSHA PEL	ACGIH TLV				
Base Metal: Iron	Balance	10 mg/M ³ for iron oxide fume	5 mg/M ³ for iron oxide fume				
Alloying Elements: Carbon	.005/.60	None established	None established				
Manganese	.05/1.50	(c) 5 mg/M ³	(c) 5 mg/M ³ -dust 1 mg/M ³ -fume				
Phosphorus	.15 max	None for inorganic phosphates	None for inorganic phosphates				
Sulfur	.05 шах	13 mg/m ³ as SO ₂	5 mg/M ³ as SO ₂				
Aluminum	.19 max ***		10 mg/H3				
Metallic Coating: Zinc	10 max	The second secon	10 mg/M ³ -Total ZnO dust 5 mg/l ³ -Resp. ZnO dust & fum				
Oil coating ma	be used;	(c) denotes "ceiling limit" whi any time see Annex II.	ch is not to be exceeded at				
			:				

NOTE: All commercial metals contain small amounts of various elements in addition to those specified. These small quantities, frequently referred to as "trace" or "residual" elements, generally originate in the raw materials used. Typical levels of commonly involved trace or residual elements that may be encountered in steel products are provided in Annex I so that their potential hazards may be considered.

III. PHYSICAL DATA

MELTING POINT **BASE METAL:**

2750° F

METALLIC COATING:

800° F

APPEARANCE AND ODOR:

Metallic Gray, No Odor

A CONTRACTOR OF THE PROPERTY OF THE PARTY OF

IV. FIRE AND EXPLOSION HAZARD DATA

STEEL PRODUCTS IN THE SOLID STATE PRESENT NO FIRE OR EXPLOSION HAZARD.

V. REACTIVITY DATA

Stable under normal conditions of use, storage, and transport. Will react with strong acid to liberate hydrogen. At temperatures above the melting point of the coating, may liberate zinc fumes.

VI, HEALTH HAZARD DATA	· · · · · · · · · · · · · · · · · · ·
	inhelation, ligest on or contact health hazard. However, operations with as a thing, atc., which results in elevating the temperature of the product to or acove
FFFECTS OF OVEREXPOSURE:	MAJOR EXPOSURE HAZARD
	INHALA- SKIN EYE CONTACT INGESTION
benign pneumoconiosis (siderosis). Inhalmay possibly enhance the risk of lung car pulmonary carcinogens. The inhalation of high concentrations Manganese, Copper, Lead and/or Zinc in thinfluenza-like illness termed metal fume	of freshly formed oxide fumes and dusts of me respirable particle size range can cause an fever. Typical symptoms last 12 to 48 hours in the mouth, dryness and irritation of the
	overexposure to airborne fumes and particulates, reathing is difficult or has stopped, adminis-
	ndicated. Seek medical attention promptly.
Treat metal fume fever by bed rest, and a	dminister a pain and fever reducing medication.
VII. SPILL OR LEAK PROCEDURES	
NOT APPLICABLE TO STEEL IN THE SOLID STATE.	
1. SPECIAL PROTECTION INFORMATION	
RESPIRATORY: NIOSH/MSHA-approved dust and fum particulates. Appropriate respirator selection depen	e respirators should be used to avoid excessive inhalation of ds on the magnitude of exposure.
SKIN: Protective gloves should be worn as required for weld	ing, burning or handling operations.
EYE: Use safety glasses or goggles as required for welding	, burning, sawing, brazing, grinding or machining operations.
VENTILATION: Local exhaust ventilation should be machining to prevent excessive dust or fume exposure.	provided when welding, burning, sawing, brazing, grinding or
OTHER PROTECTIVE EQUIPMENT: Depending upon the conditions of use and specific was be required to control exposures.	ork situations, additional protective equipment and/or clothing
IX. SPECIAL PRECAUTIONS	
PRECAUTIONS TO BE TAKEN IN HANDLING AND STO Operations with the potential for gene lates should be evaluated and controlled or dusts.	PRAGE: rating high concentrations of airborne particu- as necessary. Avoid breathing metal fumes and/
OTHER COMMENTS:	
No additional comments are believed to	be necessary for this product.

THIS INFORMATION IS TAKEN FROM SOURCES OR BASED UPON DATA BELIEVED TO BE RELIABLE: HOWEVER, UNITED STATES STEEL CORPORATION MAKES NO WARRANTY AS TO THE ABSOLUTE CORRECTNESS OR SUFFICIENCY OF ANY OF THE FOREGOING OR THAT ADDITIONAL OR OTHER MEASURES MAY NOT BE REQUIRED UNDER PARTICULAR CONDITIONS.

I li

USS Code No. 3C013

DNR MICHIGAN DEPARTMENT OF NATURAL RESOURCES

Please print or type.

*4
X∕ '

DO NOT WRITE IN THIS SPACE

П.		DIS.	REJ.
	_	_,_,	 — .

			г
n	E.	J.	- 1

Required under authority of Act 64, P.A. 1979, as amended and Act 136, P.A. 1969.

Failure to file is punishable under section 299.548 MCL or Section 10 of Act 136, P.A. 1969.

Form Approved. OMB No. 2000-0404. Expires 7-31-86

3. Generator's Name and Melling Address KAMPIG STEEL PRODUCK 31, 52 J. 3. South 44519 5. Transporter I Company Name 6. USERAID Number CALPINET TOOR THE STATE AND THE STATE ST		WASTE MANIFEST 1. Generator's US EPA ID No. WASTE MANIFEST	Manifest Document No	2. Page 1 Inform is no law.	nation in the shaded area to required by Feder
Services Services Corp Servi		3. Generator's Name and Mailing Address		A State Manifest	Document Number
4. Generator's Phone 1 2.9 2.44 - 5446 5. Transporter Company Name C. All Company Name S. US EPA ID Number C. PLANTED CONCIN Name S. US EPA ID Number S. BERGE Interporter's Done 37-577. Transporter 2 Company Name 8. US EPA ID Number C. PLANTED CONTROL Name S. US EPA ID Number S. CHARLES CONTROL Name S. CHARLES CONTROL NAME CONTROL NAME S. CHARLES CONTROL N		57533 CR 3. SOUTH			
Chemical Services Corp BL-1310/10/10/10/10/10/10/10/10/10/10/10/10/1	-		EPA ID Number	to Strie Transport	ėr's ID
3 Designated Facility Name and Site Address Chem-Net Service's 10. USERAID Number G Sief Facility's ID 11. US DOT Description (including Proper Stipping Name, Hazard Class, and ID Containers ID NUMBER) 11. US DOT Description (including Proper Stipping Name, Hazard Class, and ID Containers ID NUMBER) 12. US DOT Description (including Proper Stipping Name, Hazard Class, and ID Type ID NUMBER) 13. US DOT Description (including Proper Stipping Name, Hazard Class, and ID Number ID Numbe		chemical services Corp 12/1/1/18		Di Transporter's P	none 312-597-3
Separation of the proper shipping name and site Address 10. US EA ID Number GISSE(Facility's ID CAPPED ALLE STATE OF THE PROPERTY OF THE PROPE			L	the same of the sa	The property of the second sec
11. US DOT Description (including Proper Shipping Name, Hazard Class, and No. Type Channings) a. WASTE TOPCOOT Studge NA 9189 b. WASTE TOPCOOT Studge NA 9189 b. HAZARdaus WASTE Solid Nos 110 1744 559 C Joint No. Type Channings No. Type Ch		9. Designated Facility Name and Site Address 10. US	EPA ID Number	100 March 100 State 100 St	
11. US DOT Description (including Proper Shipping Name, Hazard Class, and HAM DESCRIPTION (INCLUDED) Proper Shipping Name, Hazard Class, and US Type (INCLUDED) (INCLUDED) Proper Shipping Name (INCLUDED) Proper Shipping Nam	$\ $	18550 Allen Ad		H; Facility's Phon	0
B. WASTE TOP COAT Sludge NA 9187 HAZARDOUS WASTES Solid NOS 100141 559 C 1001617 D. WASTE TOP COAT Sludge NA 9187 LETERAL DESCRIPTION SINCE SOLID NOS 1001617 D. WASTE TOP COAT Sludge NA 9187 LETERAL DESCRIPTION SINCE SOLID NOS 1001617 D. Special Handling Instructions and Additional Information 15. Special Handling Instructions and Additional Information 16. GENERAL DESCRIPTICATION: I hardly declare that the contents of this consignment are fully and accurately described above by proper shipping name are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. Unless an asmall quentify hat I have a program in place to radius his volume and toxicity of waste generated to the degree I have determined to be economically prace benefits the method of restment, storage or disposal currently evaluable to me which minimizes the present and citrure threat to human health and another transported to the degree I have determined to be economically prace benefits the method of restment, storage or disposal currently evaluable to me which minimizes the present and citrure threat to human health and the present and citrure threat to human health and the present and citrure threat to human health and the present and citrure threat to human health and the present and citrure threat to human health and the present and citrure threat to human health and the present and citrure threat to human health and the present and citrure threat to human health and the present and citrure threat to human health and the present and citrure threat to human health and the present and citrure threat to human health and the present and citrure threat to human health and the present and citrure threat to human health and the present and citrure threat to human health and the present and citrure threat to human health and the present and citrure threat to human health and the present and citrure threat to human hea					
d. 15. Special Handling Instructions and Additional Information 16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and uso classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable inframational and malinarial government regulations. Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a wester minimization certification under Section 30 of RGRA, labe certify that have a program in place to record the volume and toxicity of remarks generated to the degree I have determined to be economically prace and in the selected from the se	G ├			Type Quantity	Unit No.
d. 15. Special Handling Instructions and Additional Information 16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and uso classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable inframational and malinarial government regulations. Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a wester minimization certification under Section 30 of RGRA, labe certify that have a program in place to record the volume and toxicity of remarks generated to the degree I have determined to be economically prace and in the selected from the se	N	WASTE TOPCOM STUAGE NA	1187	10 KSS	
d. Additional Descriptions (GRIMAGONES USIGNALOV) B. Handling Codes for Wastes (GLI) B. Special Handling Instructions and Additional Information 16. GRIMAGONE'S CERTIFICATION: I hereby decide that the contents of this consignment are fully and accurately described above by solven and are clearling to applicable International regulations. Unless I are a small quantity generator who has been exempled by statute or regulation from the duty to make a waste minimization certification under Section 300 the SQL has selected the method of treatment, storage or disposal currently evaluable to me which minimizes the present and future threat to be anonomically practice than selected the method of treatment, storage or disposal currently evaluable to me which minimizes the present and future threat to human health and environment. Printed/Typed Name CALVIN J. FURIES 17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name Signature Signature Signature Signature Signature Wanth Day 19. Discrepancy Indication Space 20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in later 19.	R _	HAZArdous WASTE Solid A	100 LILO	11 7 7 7 7 7 7 7 7 7 7 7 9 9 9 9 9 9 9 9	6 0007
d. Auditional Description (Codes for Waste) Additional Information Additional Information	֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓				
d. d. SHarding Codes for Wastes and Additional Information 15. Special Handling Instructions and Additional Information 16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and international government regulations. Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waster minimization contribution under Section 300 of RCRA, last centrify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically prace the and I have selected the method of treatment, storage or disposal currently available to me which minimizes the present and future threat to human health and environment. Printed/Typed Name Signature Signature Signature Printed/Typed Name CALVIN DEVALES Signature Signature Frinted/Typed Name Signature Signature Signature Waster Devaluation Devaluation Space 20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in lether 19.	֓֞֜֜֜֜֜֜֜֜֜֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֡֜֝֡֓֓֡֓֜֝֡֓֜֝֡֡֓֡֡֡֡֜֝֡֓֡֓֜֝֡֡֡֡֡	n.			
15. Special Handling Instructions and Additional Information 16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. Unless I am a small quantity generator who has been exempted by statute or regulation from the duly to make a waste minimization certification under Section 300 of RCRA, taiso certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practice to be and have selected the method of treatment, storage or disposal currently available to me which minimizes the present and future threat to human health and environment. Printed/Typed Name Signature Signature Wanth Day 17. Transporter 1 Acknowledgement or Receipt of Materials Printed/Typed Name Signature Signature Wanth Day 19. Discrepancy Indication Space 20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.	\prod		1		
15. Special Handling Instructions and Additional Information 16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 30 of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicle and I have selected the method of treatment, storage or disposal currently available to me which minimizes the present and future threat to human health and environment. Printed/Typed Name 17. Transporter 1 Acknowledgement of Receipt of Materials 18. Transporter 2 Acknowledgement or Receipt of Materials 19. Transporter 2 Acknowledgement or Receipt of Materials Printed/Typed Name Signature Printed/Typed Name Signature Printed/Typed Name Signature Wanth Day 19. Discrepancy Indication Space	-	d.			
15. Special Handling Instructions and Additional Information 16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 30 of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicle and I have selected the method of treatment, storage or disposal currently available to me which minimizes the present and future threat to human health and environment. Printed/Typed Name 17. Transporter 1 Acknowledgement of Receipt of Materials 18. Transporter 2 Acknowledgement or Receipt of Materials 19. Transporter 2 Acknowledgement or Receipt of Materials Printed/Typed Name Signature Printed/Typed Name Signature Printed/Typed Name Signature Wanth Day 19. Discrepancy Indication Space					
15. Special Handling Instructions and Additional Information 16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 300 of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practice bis and I have selected the method of treatment, storage or disposal currently available to me which minimizes the present and future threat to human health and environment. Printed/Typed Name Signature Signature Frinted/Typed Name Signature Signature Signature Manth Day I D I ISI 18. Transporter 2 Acknowledgement or Receipt of Materials Printed/Typed Name RAY F. G. A. M. b. L. Signature Wanth Day 19. Discrepancy Indication Space	Q	Avelitional Descriptions to Multipline Descriptions	The state of the s	B Handling Codes	for Wastes a/
15. Special Handling Instructions and Additional Information 16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable International and national government regulations. Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 300 of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practible and I have selected the method of treatment, storage or disposal currently available to me which minimizes the present and future threat to human health and environment. Printed/Typed Name Signature Printed/Typed Name Printed/Typed Name Signature Printed/Typed Name Printed/Typed Name Printed/Typed Name Signature Printed/Typed Name	-			Listed Aboves	b/*/
18. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 300 of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practible and I have selected the method of treatment, storage or disposal currently available to me which minimizes the present and future threat to human health and environment. Printed/Typed Name Signature Signature Printed/Typed Name Signature Printed/Typed Name Signature Signature Month Day 10 1191 19. Discrepancy Indication Space Post A model 19. Discrepancy Indication of receipt of hazardous materials covered by this manifest except as noted in later 19.	8				일 등 시 시 시 시 시 시 시 시 시 시 시 시 시 시 시 시 시 시
proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 300 of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practice and I have selected the method of treatment, storage or disposal currently available to me which minimizes the present and future threat to human health and environment. Printed/Typed Name Signature Month Day 19. Discrepancy Indication Space 19. Discrepancy Indication Space Date 19. Discrepancy Indication of receipt of hazardous materials covered by this manifest except as noted in lem 19.		5. Special Handling Instructions and Additional Information			<u> </u>
proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 300 of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practice and I have selected the method of treatment, storage or disposal currently available to me which minimizes the present and future threat to human health and environment. Printed/Typed Name Signature Month Day 19. Discrepancy Indication Space 19. Discrepancy Indication Space Date 19. Discrepancy Indication of receipt of hazardous materials covered by this manifest except as noted in lem 19.	$\ $				
Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 300 of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practible and I have selected the method of treatment, storage or disposal currently available to me which minimizes the present and future threat to human health and environment. Date	1	proper shipping name and are classified, packed, marked, and labeled, and are in all re-	nt are fully and accurately espects in proper condition	described above by a for transport by highway	(
Date Printed/Typed Name Signature Printed/Typed Name Signature Printed/Typed Name Signature Printed/Typed Name Signature Signature Printed/Typed Name Signature Signature Printed/Typed Name Signature Signature Printed/Typed Name Signature Signature Signature Signature Printed/Typed Name Signature Signature Signature Printed/Typed Name Printed/Typed Name Signature Printed/Typed Name Print		Unless I am a small quantity generator who has been exempted by statute or regulation	on from the duty to make a	a waste minimization cert	ification under Section 300:
Printed/Typed Name 17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name CANUN J FURIES 18. Transporter 2 Acknowledgement or Receipt of Materials Printed/Typed Name Printed/Typed Name RAY E. GAmble 19. Discrepancy Indication Space Signature Wanth Day Manth Day Date Date Date Date Date Date Date		ble and I have selected the method of freatment, storage or disposal currently available	of waste generated to the ole to me which minimizes	e degree I have determine the present and future to	d to be economically practi hreat to human health and
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name CALUIN J FURIES 18. Transporter 2 Acknowledgement or Receipt of Materials Printed/Typed Name Printed/Typed Name RAY 5- GAmble 19. Discrepancy Indication Space Signature Want Day Month Day Month Day Month Day Month Day Date Printed/Typed Name RAY 5- GAmble 19. Discrepancy Indication Space Date Date Date Date Date	-	Printed/Typed Name Signatur	e	·····	
Printed/Typed Name CALUIN J DEURES 18. Transporter 2 Acknowledgement or Receipt of Materials Printed/Typed Name Printed/Typed Name PAY 5. GAmble 19. Discrepancy Indication Space 20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in litem 19. Date					1110111818
18. Transporter 2 Acknowledgement or Receipt of Materials Printed/Typed Name PAY E. GAmble 19. Discrepancy Indication Space 20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in litem 19. Date	-	· · · · · · · · · · · · · · · · · · ·	8 4		
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in litem 19. Date	.	CALVIN J DEURIES (2	luin J +	DeUng	(11011/818
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in litem 19. Date	R		<u> </u>	/ //	
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in litem 19. Date	<u> </u>	RAY E. GAMBLE DA	y E. de	sample	
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in later 19.		19. Discrepancy Indication Space	•		
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in litem 19.	Ĉ				
Date Date	ᄔ	20. Facility Owner or Operator: Certification of receipt of hazardous materi	als covered by this ma	anifest except as not	ed in
			8	·····	

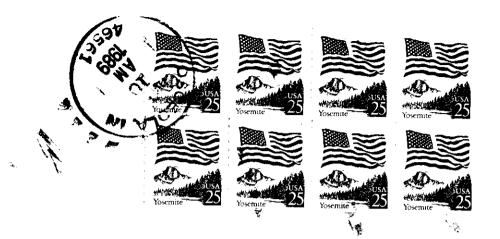
11011181815



TRUCK # 220 TRAILER # 02 (DRIVER: (

4330 WEST 137th PLACE • CRESTWOOD, ILLNOIS 60445 (312) 597-3380

1<u>8,1</u>185 ELKHART INC DESTINATION (To) CHEM **PROCESSING SITE** STATE_ _COUNTY ADDRESS_ MANIFEST # ______ HAULER PERMIT # 1301 SUPPLEMENTARY PERMIT # _ **DESCRIPTION AND CLASSIFICATION** QUANTITY NO. OF UNITS VAN TUPCOAT SLUDGE PLACARD NUMBER HAZARD CLASS WEIGHT DRIVE SAFLEN 5,500 LBS THIS IS TO CERTIFY THAT THE ABOVE NAMED ARTICLES ARE PROPERLY CLASSIFIED. DESCRIBED, PACKAGED, MARKED, AND LABELED AND ARE IN PROPER CONDITION FOR TRANSPORTATION ACCORDING TO THE APPLICABLE REGULATIONS OF THE DEPARTMENT OF TRANSPORTATION. MAKE **SIGNATURE** SPECIAL COMMENTS TIME: ARRIVED _______ LOO P.M_ DEPARTED _ UNLOADING: ARRIVED . DEPARTED





57533 (R 3) CR 3 S. ELKHART, INDIANA 46517 PHONE (219) 294-5466

TO:

Waste Management Division U.S. E.P.A. - Region V 230 South Dearborn St. Chicago, Illinois 60604

Attention: Ms Susan Swales

H SM

DPi 337